```
File 275:Gale Group Computer DB(TM) 1983-2004/Jul 20
         (c) 2004 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jul 20
         (c) 2004 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2004/Jul 20
         (c) 2004 The Gale Group
File  16:Gale Group PROMT(R) 1990-2004/Jul 20
         (c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2004/Jul 20
         (c)2004 The Gale Group
File 624:McGraw-Hill Publications 1985-2004/Jul 15
         (c) 2004 McGraw-Hill Co. Inc
File  15:ABI/Inform(R) 1971-2004/Jul 19
         (c) 2004 ProQuest Info&Learning
File 647:CMP  Computer Fulltext 1988-2004/Jul W2
         (c) 2004 CMP Media, LLC
File 674:Computer News Fulltext 1989-2004/Jun W4
         (c) 2004 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2004/Jul 19
         (c) 2004 The Dialog Corp.
File 369:New Scientist 1994-2004/Jul W2
         (c) 2004 Reed Business Information Ltd.

Set     Items   Description
S1       6453   GARBAGE(2N)COLLECT? OR AUTOMAT?(2N)MEMOR???(2N)MANAG?
S2         34   (CALL()STACK? ? OR REGISTER? ?)(10N)HEAP
S3        302   (POINTER? ? OR IDENTIF???? OR IDENTIFICATION OR ADDRESS???
                 OR MAP????)(7N)HEAP
S4          3   (POINTER? ? OR IDENTIF???? OR IDENTIFICATION OR ADDRESS???
                 OR MAP????)(7N)(CALL()SITE? ?)
S5        766   DESCRIPTOR? ?(10N)(STACK()FRAME? ? OR REGISTER? ? OR TABLE?
                 ? OR OFFSET? ? OR OFF()SET? ?)
S6       2853   (OFFSET? ? OR OFF()SET? ?)(7N)(POINTER? ? OR IDENTIF???? OR
                 IDENTIFICATION OR ADDRESS??? OR MAP???? OR HEAP? ? OR STACK(-
                 )FRAME? ?)
S7        386   CALL()STACK? ?
S8        307   CALL()SITE? ?
S9         10   FIRST()CALL()SITE? ?
S10     12639   DESCRIPTOR? ?
S11     29478   HEAP? ?
S12    542415   OFFSET? ? OR OFF()SET? ?
S13       372   STACK()FRAME? ?
S14         1   S1(50N)S2
S15        16   S1(50N)S3
S16         0   S1(50N)S4
S17         2   S1(50N)S5
S18         0   S1(50N)S6
S19         0   S1(50N)S7
S20         3   S1(50N)S8
S21         0   S1(50N)S9
S22        20   S1(50N)S10
S23       164   S1(50N)S11
S24         9   S1(50N)S12
S25         8   S1(50N)S13
S26        55   S14:S22 OR S24:S25
S27        35   RD (unique items)
S28        30   S27 NOT PD>20010729
```

28/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02252520 SUPPLIER NUMBER: 53389775 (USE FORMAT 7 OR 9 FOR FULL TEXT)
GEODESIC SYSTEMS' GREAT CIRCLE.(Great Circle 3.1 debugging software)(Software Review)(Evaluation)
Merusi, Donald
UNIX Review's Performance Computing, 17, 1, 49(1)
Jan, 1999
DOCUMENT TYPE: Evaluation LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1355 LINE COUNT: 00112

... also offers a family of functions for programming Great Circle data structure collections. Great Circle **automatically** stops any **memory - management** calls to the C run-time DLLs made by any module of the running program...

...directly allocated through such functions as GlobalAlloc(), LocalAlloc(), and TlsAlloc(), as well as the Win32 **Heap** API. This memory is scanned for **pointers** , but no **garbage collection** is performed. It is the responsibility of the programmer to perform the release of memory...

28/3,K/2 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02171544 SUPPLIER NUMBER: 20503821 (USE FORMAT 7 OR 9 FOR FULL TEXT)
JavaBeans for the enterprise. (Sun Microsystems Enterprise JavaBeans specification) (Internet/Web/Online Service Information)
Valesky, Tom
e-Business Advisor, v16, n4, p30(4)
April, 1998
LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2164 LINE COUNT: 00182

... t currently in a transaction. If this occurs, the container examines the Bean's state **descriptor** , which can be one of three values, STATELESS, STATEFUL, and PINNED. STATELESS simply means the Bean is marked as a candidate for **garbage collection** .
If a Bean is STATEFUL, its ejbPassivate() method is called to let it serialize any...

28/3,K/3 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02159223 SUPPLIER NUMBER: 20404045 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Final destruction. (Java finalizer eliminates need for memory management) (Java Advisor) (Technology Tutorial)(Column)
Waldo, Jim
UNIX Review's Performance Computing, v1, n1, p77(3)
April, 1998
DOCUMENT TYPE: Column LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1937 LINE COUNT: 00159

... run efficiently on machines with very little memory and on those with large amounts of **memory** .
Such **automatic** resource **management** cannot be done for other machine resources. This is, at least in part, because there is no technology like **garbage collection** that is well understood for other resources. More importantly, the connection between the availability of resources like file **descriptors** and memory is somewhere between nonobvious and nonexistent. So binding all resource management to memory...

to the reader.

Given that my AccessFile class now requires explicit management of the file- **descriptor** resource, is there any reason for the finalize() method? If the Java model is one that encourages splitting the **management** of most resources from the **automatic management** of **memory** , is there any reason to have a finalizer in any class?

If programmers always read...

28/3,K/4 (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02028313 SUPPLIER NUMBER: 19031224 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Interface and implementation, part II. (Sun Microsystems' Java programming language) (Technology Tutorial)(Tutorial)
Waldo, Jim
UNIX Review, v15, n2, p71(4)
Feb, 1997
DOCUMENT TYPE: Tutorial ISSN: 0742-3136 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2447 LINE COUNT: 00189

... object method, finalize(), is provided to allow cleanup of system resources as part of the **garbage - collection** process. This method is guaranteed to be called sometime after an object has been determined to be unreferenced and hence ready for **garbage collection** . It can be used to free up file **descriptors** and other system resources that are not Java-centric and thus must be explicitly managed...

28/3,K/5 (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01949259 SUPPLIER NUMBER: 18166426 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Java's virtual world.(includes related article on object programming) (Technology Information)
Lentczner, Mark
Microprocessor Report, v10, n4, p8(5)
March 25, 1996
ISSN: 0899-9341 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 3802 LINE COUNT: 00298

... VM and will require a large coding effort. In hardware versions of the Java VM, **garbage collection** will probably be implemented in software with some assistance from the silicon.

Stack Contains a **stack frame** holds information needed for the execution of a message (or function). The Java VM specification...

28/3,K/6 (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01928042 SUPPLIER NUMBER: 18180845 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Programming with Java. (Technology Information)
Waldo, Jim
UNIX Review, v14, n5, p31(5)
May, 1996
ISSN: 0742-3136 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3480 LINE COUNT: 00271

... number drops to zero, the object is automatically marked for collection.

The next time the **garbage collector** runs, all objects marked for collection are freed from memory. Resources that need to be explicitly released from the object, such as file **descriptors** , can he dealt with by

the author of the object's class supplying a finalize...

...guaranteed to be called once (and only once) prior to the collection of the object.

Garbage collection is at least simplified, if not fully enabled, by the replacement of pointers with language-defined references. **Garbage collection** requires that the environment be able to distinguish between references to objects and other entities...

28/3,K/7 (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01725066 SUPPLIER NUMBER: 16018385 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Q&A C/C++. (question and answer) (Column)
DiLascia, Paul
Microsoft Systems Journal, v10, n2, p89(6)
Feb, 1995
DOCUMENT TYPE: Column ISSN: 0889-9932 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 2181 LINE COUNT: 00187

... an exception is thrown. I showed how to use a Deleter class that automatically deletes **heap** objects when their **pointers** go out of scope, as happens when an exception is thrown. The Deleter class is...

...memory allocations in functions that call other functions that may raise exceptions. It provides automatic **garbage collection** so you don't have to worry about all the possible ways control might flow...

28/3,K/8 (Item 8 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01608365 SUPPLIER NUMBER: 14014529 (USE FORMAT 7 OR 9 FOR FULL TEXT)
BASIC path finding. (an assembled string function for compiled Microsoft BASIC programs)(Technical) (Tutorial)
Lesser, Murray L.
Windows-DOS Developer's Journal, v4, n7, p27(5)
July, 1993
DOCUMENT TYPE: Tutorial ISSN: 1059-2407 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2073 LINE COUNT: 00160

... full, even though it might contain many "invalid" strings. At that time, BASIC's automatic **garbage collection** takes over. To simplify a bit, **garbage collection** rewrites all the valid strings, starting at the bottom of string space, resetting the current "top of used space" pointer and the string **descriptors** as it goes. If, after **garbage collection** , there still isn't enough room in string space to write the new string variable...

28/3,K/9 (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01599575 SUPPLIER NUMBER: 13761874 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Garbage collection in C++. (Laine Stump's C++ Diary) (Column)
Stump, Laine
EXE, v7, n10, p54(4)
April, 1993
DOCUMENT TYPE: Column ISSN: 0268-6872 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2587 LINE COUNT: 00197

... misunderstand, reference counting is still quite useful in simple situations - just worthless in general usage).

Garbage Collection

So we shift our interest to **Garbage Collection** (GC). GC is usually implemented as a routine periodically called to analyse all objects on the **heap** , as well as all **pointers** existent in the program, and decide, through some algorithm of following pointer chains, which objects are unreachable and should therefore be disposed of.

The disadvantage of **Garbage Collection** is that it can incur a serious performance penalty on the program (Meyer says that...

28/3,K/10 (Item 10 from file: 275)

01493819 SUPPLIER NUMBER: 11682260 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Symbolics: CLOE, Genera and Joshua. (AI Language Resource Guide: LISP and Scheme) (Directory)

AI Expert, v7, n1, p49(1)
Jan, 1992
DOCUMENT TYPE: Directory ISSN: 0888-3785 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 260 LINE COUNT: 00022

TEXT:

...support includes a virtual-memory extension to DOS; ANSI condition (error) system; CLOS; CLIM; ephemeral **garbage collection** ; and LOOP. Other features include incremental compilation, **stack - frame** debugger, and metering.

28/3,K/11 (Item 11 from file: 275)

01465579 SUPPLIER NUMBER: 11667066 (USE FORMAT 7 OR 9 FOR FULL TEXT)

ARM600 targets low-power applications: ARM core extended with 32-bit addressing, "object-oriented" MMU. (memory management unit) (new microprocessor from Advanced RISC Machines Ltd.) (Product Announcement)

Case, Brian
Microprocessor Report, v5, n23, p8(4)
Dec 18, 1991
DOCUMENT TYPE: Product Announcement ISSN: 0899-9341 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 2493 LINE COUNT: 00189

... encoded in "ap" is ignored. The ability to override the normal "ap" permission checking facilitates **garbage collection** in object-oriented systems where the **garbage collection** process must have unrestricted access to all the objects in the section.

If the level- 1 **descriptor** is for a page, the page **table** base address from the level-1 **descriptor** is concatenated with the level-2 index from the virtual address; the concatenation points to a level-2 **descriptor** , which is one of the possibilities shown in Figure 2. As with the section, the domain field from the level-1 **descriptor** selects a domain field, and the domain field determines whether or not to apply the permission checking from the appropriate "ap" field from the level-2 **descriptor** .

The advantage of domains is that by simply changing a two-bit field in the domain access control register, a **garbage collection** process can be started and given carte blanch access to 1 AM of objects without the overhead of changing the "ap" fields in all the level-1 and level-2 **descriptors** and then changing them back.

Conclusions

The ARM600 continues the ARM tradition of simple, low...

28/3,K/12 (Item 12 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01451460 SUPPLIER NUMBER: 11276237 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Real-time programming in Common LISP. (G2 Real-Time Expert System) (Special Section - LISP) (technical)
Allard, James R.; Hawkinson, Lowell B.
Communications of the ACM, v34, n9, p64(6)
Sept, 1991
DOCUMENT TYPE: technical ISSN: 0001-0782 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3975 LINE COUNT: 00326

... still have execution time dependencies on the size of scanned data structures.
All Common Lisp **garbage collectors** determine which heap-allocated data structures are still in use by scanning used data structures...

...to other data structures, starting from a root set of pointers including global variables and **stack frames** . The referenced data structures are scanned in turn. In this way, every data structure still...

...it into a nontemporary data structure.
Temporary areas are typically implemented as a memory allocation **heap** whose allocation **pointer** is saved on entrance to the region and restored on exit. This is not a...

...use.
It is often assumed that software written in Common Lisp entails use of a **garbage collector** . It is our view that a garbage-creating programming style is what entails use of...Lisp: The Language, Second Edition, Digital Press, Bedford, Mass., 1990, 232-236.
Categories and Subject **Descriptors** : D3.3 [Programming Languages]: Language Constructs and Features--Dynamic storage management; I.2.5 [Artificial...

...Expert system tools and techniques
General Terms: Design, Languages, Performance
Additional Key Words and Phrases: **Garbage collection** , Lisp, macros, realtime programming, type declaration
About the Authors:
JAMES R. ALLARD is manager of...

28/3,K/13 (Item 13 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01345224 SUPPLIER NUMBER: 08042278 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Phoenix: a safe-in-memory file system. (time-stamped versions of file system allow for reserve memory) (technical)
Gait, Jason
Communications of the ACM, v33, n1, p81(6)
Jan, 1990
DOCUMENT TYPE: technical ISSN: 0001-0782 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2736 LINE COUNT: 00215

... the tree changes to point to the new location. The old leaf node is ultimately **garbage collected** .
Exception Conditions
The following are the possible exceptions that need to be handled robustly:
* Page...

...space left in file system--actually, no memory space remaining.
* Nonexistent interior node--the root **offset** for a page index is

NULL.
* Nonexistent leaf node--the interior offset for a page...

28/3,K/14 (Item 14 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01255579 SUPPLIER NUMBER: 07076585 (USE FORMAT 7 OR 9 FOR FULL TEXT)
AI techniques enter the realm of conventional languages. (artificial intelligence) (includes related article on space station system troubleshoots with embedded AI)
Falk, Howard
Computer Design, v27, n19, p45(5)
Oct 15, 1988
ISSN: 0010-4566 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2381 LINE COUNT: 00193

... Common Lisp construct and recognize such data structures. These structures are known to the Lisp **garbage collector** , which is a routine that makes memory available by clearing out infrequently used material.
The interface between the languages doesn't create objects that will be discarded by the **garbage collector** . C and other procedural languages have **stack frame** formats that are radically different from that of Lisp. Lucid's approach lets Lisp and...

28/3,K/15 (Item 15 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01098996 SUPPLIER NUMBER: 00568970
Reference Count Garbage Collection.
Christopher, T.W.
Software - Practice & Experience, v14, n6, p503-507
June, 1984
ISSN: 0038-0644 LANGUAGE: ENGLISH RECORD TYPE: ABSTRACT

...ABSTRACT: has been developed. Its major advantage is that it does not need the location of **pointers** outside the **heap** . This allows it to be used for implementing storage management systems with languages such as FORTRAN. The algorithm incorporates full marking **garbage collection** in the reference count storage reclamation scheme. Thus dynamic storage allocation subroutines can be developed for several languages. The algorithm is less efficient than conventional **garbage collection** schemes.

28/3,K/16 (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01740499 Supplier Number: 53136340 (USE FORMAT 7 FOR FULLTEXT)
Geodesic Systems Announces "Memory Audit" Consulting Service.
Business Wire, p1096
Oct 28, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 288

... usage and make specific recommendations for improvement. Additionally, the consultants will review memory allocation methods, **identify** costly memory leaks and premature frees, provide **heap** profiling statistics, and perform load time and application performance analysis. This all adds up to...

...the leading developer of technology and commercial products in the specialized area of software memory **management** . Its mission is to provide

automatic memory management solutions for large scale mission critical applications.
Geodesic Systems is headquartered in Chicago, Illinois, USA...

28/3,K/17 (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01684575 Supplier Number: 50207087 (USE FORMAT 7 FOR FULLTEXT)
Java Speed Barrier Smashed; Key Benchmarks Indicate New JOVE Technology Produces Java Speeds Up to 15 Times That of Current Technologies.
Business Wire, p7290102
July 29, 1998
Language: English Record Type: Fulltext
Article Type: Article
Document Type: Newswire; Trade
Word Count: 794

... was reduced by 55 percent. In Program 2, JOVE removed 91 percent of the dynamic **call sites** and reduced overall **call sites** by 70 percent.
Large Java applications work by creating, using, and throwing away millions of...

...is no longer needed, but continues to take up space in the computer's memory. **Garbage collection** is the process of identifying and recycling this memory so that it may be used...

28/3,K/18 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

06328664 Supplier Number: 54596503 (USE FORMAT 7 FOR FULLTEXT)
Net-centric OS unites components.(Technology Information)
Mookken, Thomas
Electronic Engineering Times, p66(1)
May 10, 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1708

... Limbo completely manages the lifetime of system resources by tying windows, network connections and file **descriptors** to the **garbage collector** . Coupled with Limbo's "instantly free" property, this eliminates the need even to write special...

28/3,K/19 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

04777358 Supplier Number: 47032491 (USE FORMAT 7 FOR FULLTEXT)
Inferno, Limbo take Java to coding task
Sharma, Ravi
Electronic Engineering Times, p60
Jan 13, 1997
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1628

... extensively in the programming model. Limbo has more general pointers, without sacrificing safety. Limbo's **garbage collector** has constant overhead, so its operation does not conflict with real-time constraints.
Also, the connections and file **descriptors** to the **garbage collector** . Coupled with Limbo's instant-free property, that eliminates the

need even to write special...

28/3,K/20 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

00787337
The DOD is considering a $160mil waste-to-energy facility for the Navy's Norfolk Shipyard (Portsmouth, Va) to save up to $3 mil/yr in coal costs.
Energy User News July 12, 1982 p. 1,8

...RDF to the Navy at 15% below the cost of coal and give discounts to **offset** the additional $15 mil in capital costs the Navy will need to spend to burn...

... shipyard and 3 turbine generators to produce electricity. The SPSA will collect and process the **garbage collected** from an 8 county area. Pending DOD approval, completion: 1987. ...

28/3,K/21 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

12401589 SUPPLIER NUMBER: 63663976 (USE FORMAT 7 OR 9 FOR FULL TEXT)
ARCACSAS: Sales Tax Approved.
Albanese, Elizabeth
Bond Buyer, 333, 30939, 28
July 25, 2000
ISSN: 0732-0469 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 149 LINE COUNT: 00014

... to eliminate a 2.1 mill city property tax and $14 per month in residential **garbage collection** and mosquito-control fees if voters approved the sales tax.
The tax is projected to...

...continued street and drainage improvements, and intends to put the other half into operations to **offset** the loss of the property tax and service fees.
The city had been collecting a...

28/3,K/22 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

10196533 SUPPLIER NUMBER: 20584187 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Java solutions push for lower resources.(embedded developers need to create low-level resources for Java applications) (Technology Information)
Saunders, Mark
Electronic Engineering Times, n1006, p112(1)
May 11, 1998
ISSN: 0192-1541 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1291 LINE COUNT: 00111

... about lack of determinism in context switching and other basic system services, the implementation of **garbage collection** in JVM environments prevents the development of predictable response times.
All **garbage - collection** algorithms generally share some fundamental characteristics. The first step is to determine all the **pointers** or references to the **heap** that exist in static and local variables. The **garbage collector** then simply follows **pointer** references systematically through the **heap** until every reachable memory block has been found. This and the preceding steps are known...of pointers in blocks of memory that have already been "marked." To ensure that the **garbage**

collector is informed every time a modification to a pointer is made, one approach used by...
...write barriers."

The operation is performed every time the application modifies the value of a **pointer** residing in the **heap** . While this adds some overhead to every **pointer** write in the application, it is relatively predictable. By ensuring that **garbage collection** acts like any other pre-emptible thread, write barriers can provide the fine-grained control over how frequently **garbage collection** occurs. Thus, system response times can be carefully calibrated.

28/3,K/23 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

09810002 SUPPLIER NUMBER: 19917801 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Rice Financial Products Company and Dade County Complete Alternative Variable Rate Swap
PR Newswire, p1026NYSU009
Oct 26, 1997
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 523 LINE COUNT: 00047

... year. The result is an extremely attractive transaction for the County, one that will reduce **garbage collection** fees for several years in a very competitive environment."

Under the Alternative Variable Rate, just as with its current structure, the County will receive adjusted variable rates to **offset** the interest rates on its underlying bonds, and in exchange, the County will pay a...

28/3,K/24 (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

09149794 SUPPLIER NUMBER: 18914170 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The scoop on Java. (Java programming language)(includes related articles on Java basics and using Java for embedded development)
Levy, Markus
EDN, v41, n23, p73(9)
Nov 7, 1996
ISSN: 0012-7515 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 4744 LINE COUNT: 00381

... idle cycles or when inadequate memory resources trigger an exception.

Similar to a disk drive, **garbage collection** produces memory-space fragmentation, known as "heap fragmentation" (ILLUSTRATION FOR FIGURE 4 OMITTED). The more fragmentation, the more often the runtime system must call the **garbage collector** , which results in lower performance. The cure for fragmentation is **heap** compression. In lieu of **pointers** , the Java language uses symbolic handles for all memory accesses. Handles provide an extra level...

...assigns it a handle, and stores the handle in a fixed memory area. When the **garbage collector** performs heap compression, the handle is updated to reflect the new location of the object memory. All future references through that handle access the object at its new memory **address** . Although hooks for on-the-fly **heap** compression are available in Java, this feature is implementation dependent. Sun's implementation of the **garbage collector** does not perform heap compression.

Running Java on an RTOS

One of the most important...

28/3,K/25 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

02385873 117541735
Architectures for secure portable executable content
Gritzalis, Stefanos; Aggelis, George; Spinellis, Diomidis
Internet Research v9n1 PP: 16-24 1999
ISSN: 1066-2243 JRNL CODE: NTRS
WORD COUNT: 5826

...TEXT: this portability layer (Sun Microsystems, 1997a;1997b). The JVM architecture defines an instruction set, a **register** set, a stack, a **garbage - collected heap** , and a memory area. This architecture allows a single executable to run unmodified on many...

28/3,K/26 (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01760156 04-11147
Testing options for residential organics
Sinclair, Robert G
BioCycle v40n1 PP: 32-36 Jan 1999
ISSN: 0276-5055 JRNL CODE: BIO
WORD COUNT: 2844

...TEXT: cost standpoint, a large-scale purchase of the more expensive carts would have to be **offset** by a reduced **collection** frequency.

Weekly **garbage collection** was maintained in most of the pilot areas. In Munster Hamlet, an alternating weekly schedule was tested for five months. Organics were collected one week and **garbage** was **collected** the next week; blue boxes were collected weekly. This area had the highest diversion overall...

28/3,K/27 (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01375447 00-26434
The costs of cost-cutting
Anonymous
Worklife Report v10n2 PP: 10-12 1996
ISSN: 0834-292X JRNL CODE: WOL
WORD COUNT: 848

...TEXT: what are the savings? Whatever savings there are to the hospitals are perhaps more than **offset** by the health costs imposed on the public--not to mention the unemployment benefit and...

...to use their education and skills.

Whether we are talking about hospitals, schools, social services, **garbage collection** , public libraries, government offices, or penitentiaries, reductions in services inevitably impose some costs on society...

28/3,K/28 (Item 4 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00778978 94-28370
Large scale yard waste composting
Kelly, Scott
BioCycle v34n9 PP: 30-32 Sep 1993

ISSN: 0276-5055 JRNL CODE: BIO
WORD COUNT: 2025

...TEXT: bagged. Simply, the efficiency gained by debagging at the composting facility during the peak season **offset** the additional costs.

SMOOTH SCHEDULING

The waste collection schedule proved to be as important as the collection method. The existing **collection** system provided **garbage** pick-up twice weekly, with recyclables collected separately (often on a different day), at a...

28/3,K/29 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

01191223 CMP ACCESSION NUMBER: EET19990510S0054
Net-centric OS unites components
Thomas Mookken, Product Manager, Inferno Network Software Solutions, Lucent Technologies Inc., Murray Hill, N.J.
ELECTRONIC ENGINEERING TIMES, 1999, n 1060, PG66
PUBLICATION DATE: 990510
JOURNAL CODE: EET LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Communications - Focus: Distributed Computing
WORD COUNT: 1708

... Limbo completely manages the lifetime of system resources by tying windows, network connections and file **descriptors** to the **garbage collector** . Coupled with Limbo's "instantly free" property, this eliminates the need even to write special...

28/3,K/30 (Item 2 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

01161103 CMP ACCESSION NUMBER: EET19980511S0092
Java solutions push for lower resources
Mark Saunders, Technical Marketing Engineer, Microtec Division Of Mentor Graphics, San Jose, Calif.
ELECTRONIC ENGINEERING TIMES, 1998, n 1006, PG112
PUBLICATION DATE: 980511
JOURNAL CODE: EET LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Embedded Systems
WORD COUNT: 1216

... about lack of determinism in context switching and other basic system services, the implementation of **garbage collection** in JVM environments prevents the development of predictable response times.

All **garbage - collection** algorithms generally share some fundamental characteristics. The first step is to determine all the **pointers** or references to the **heap** that exist in static and local variables. The **garbage collector** then simply follows **pointer** references systematically through the **heap** until every reachable memory block has been found. This and the preceding steps are known...of pointers in blocks of memory that have already been "marked." To ensure that the **garbage collector** is informed every time a modification to a pointer is made, one approach used by...

...write barriers."

The operation is performed every time the application modifies the value of a **pointer** residing in the **heap** . While this adds some overhead

to every **pointer** write in the application, it is relatively predictable. By ensuring that **garbage collection** acts like any other pre-emptible thread, write barriers can provide the fine-grained control over how frequently **garbage collection** occurs. Thus, system response times can be carefully calibrated.